

ANNUAL REPORT OF THE BOMBAY FOREST SURVEY PARTY FOR THE YEAR ENDING 30TH SEPTEMBER 1897.

No. ^{S.}_{1922-A.} OF 1897.

Poona, 11th November 1897.

Submitted to Government. As required by the Standing Orders, copies of the report will be furnished to the Conservators of the three Forest Circles and to the Divisional Commissioners, together with copies of this office review.

2. The party remained under the control of Major W. J. Bythell, R.E., throughout the year, with the exception of the periods (1) 1st October to 2nd November 1896, when he was on privilege leave, and (2) 8th to 30th September 1897, when he was deputed on service with the Mohmand Field Force as Survey Officer, during which period Mr. Tapsell was placed in temporary charge in addition to his own duties.

3. As mentioned in paragraph 3 of this Office No. ^{S.}₂₂₃₈, dated 16th October 1896, reviewing last year's report, an additional grant of Rs. 4,000 was sanctioned * by Government to meet the requirements of the additional hands employed in the party for the year under report.

* G. R. No. 2419, dated 27th March 1897, R. D.

4. The following table compares the total cost of the party and the distribution of it among the three Circles during the year with that of the previous year :—

| Year. | | | | Northern Circle. | Central Circle. | Southern Circle. | Total. |
|---------|-----|-----|-----|------------------|-----------------|------------------|--------|
| 1895-96 | ... | ... | ... | 6,963 | 22,436 | 47,969 | 77,388 |
| 1896-97 | ... | ... | ... | 10,766 | 31,802 | 40,250 | 82,818 |

The cost in the Southern Circle should be reduced by Rs. 10,000, being the estimated cost of the Topographical Survey in Kánara carried out by the party for the Survey of India, as has been explained in previous reports.

5. The Superintendent has compared in detail the results of the year's operations with those of the previous year, and has explained the causes which led to the increase of the cost rate under each item. It may, however, be observed that the Superintendent has not explained why it was necessary to employ European Agency during the year under report on triangulation in the Central Circle, which has resulted in an increase in the cost rate, when the same kind of work was done last year by Native Agency exclusively. The point has already attracted notice of the Surveyor-General at his recent inspection of the office, and the Superintendent proposes to carry out the instructions of the Surveyor-General in future. The increase in the cost rate of the 16" work also invites comment. The work was done by junior men and should have been more closely supervised. The point will, no doubt, receive the Superintendent's attention, and it is hoped that the current year's outturn will show better results.

6. The work done during the year under report is shown below :—

Northern Circle.

The operations in this Circle consisted in triangulation, traversing and detail survey on the 8" scale, the first two in the Māndvi Tāluka of the Surat Collectorate, completing 141 and 10 square miles at an average cost of Rs. 6 $\frac{3}{4}$ and 4 $\frac{3}{4}$ per square mile, respectively, and the last covering an area of 51.7 square miles in the Máhim Tāluka of the Thána District, at an average cost of Rs. 189 per square mile, a rate higher than that (Rs. 168) of similar work in the Váda Tāluka last year.

Central Circle.

The survey under this head was confined to Shrigonda, Rāhūrī and Nevāsa Bābul Reserves, 16" Scale: Tālukas of the Ahmednagar District, and covered an area of 32.90 square miles. Its cost was Rs. 156 per square mile. Besides the above, 134.47 square miles of survey of ordinary forest on the 4" scale were completed in Purandhar and Bhimthadi Tālukas of the Poona District, and in Akola in Ahmednagar, at a cost of about Rs. 92 per square mile, a rate comparatively higher than that (Rs. 62) in the previous year. In addition to this, 101.76 square miles of survey on an 8" scale of teak reserves were carried out in Bhimthadi in Poona, and in Akola in Ahmednagar, at a cost of Rs. 112 per square mile. Of this, only 5.62 square miles were surveyed in Bhimthadi, the remainder being in Akola Tāluka alone, thus completing the Forest Survey operations in that tāluka. The cost rate is comparatively higher than that during the previous year. An area of 161 square miles of supplementary triangulation was completed in Akola Tāluka of the Ahmednagar District, at an average cost of Rs. 18 per square mile.

Southern Circle.

Advance triangulation to the extent of 194 square miles, at a cost Rs. 4, and of 880 square miles, at a cost of about Rs. 8 for 8" and 4" detail surveys, respectively, was carried out, the former in Roha in Kolāba and the latter in Kumta, Siddāpur and Honāvar in Kānara. Besides the above, the supplementary traversing on the 4" scale to the extent of 234 square miles, at a cost of Rs. 11, was effected in Sirsi and Ankola Tālukas in Kānara. In addition to this, detail survey to the extent of 387.50 square miles, at a cost of Rs. 73, was completed in the above two tālukas as also in Kārwar and Kumta Tālukas of the same district. Detail survey on 8" scale of 15 square miles, at an average cost of Rs. 110 per square mile, was also carried out in Alibāg Tāluka of the Kolāba District. The cost rates of traversing and triangulation compare favourably with those of similar work in the previous year, while the rate of detail survey is in excess of that of similar work done last year.

7. The excess work of the party in respect of mapping is still not kept up to date. To prevent accumulation of arrears, the Superintendent proposes in future to divide the year equally between the field and recess seasons in this branch, and it is hoped that the arrangement will secure the end in view.

8. The health of the men who were employed in the Northern and Central Circles was good, notwithstanding the fact that in the latter Circle they had to work in the trying heat of the sun during March and April, and had to encamp long distances from the scene of their work owing to deficiency of water. The men employed under Mr. Tapsell in Kānara in the Southern Circle, however, suffered from sickness, resulting in the death of one of the efficient hands. There was another casualty among the men, which occurred at Poona from cholera. Notwithstanding these difficulties, the party appears to have worked creditably.

9. The Superintendent's inspection tour does not appear to have extended to all the parts of his charge, inasmuch as the work done in the Northern Circle seems to have been not tested by him. This is probably owing to his having lost one month by his stay at Poona awaiting instructions to join the Mohmand Boundary Demarcation Commission, the orders being subsequently cancelled.

10. The Superintendent intimates that copies of coloured index maps showing the progress made up to date will be supplied when received from Calcutta, where the originals have been sent for printing. These, when received, will be distributed as usual to the officers concerned.

E. H. HEARN,

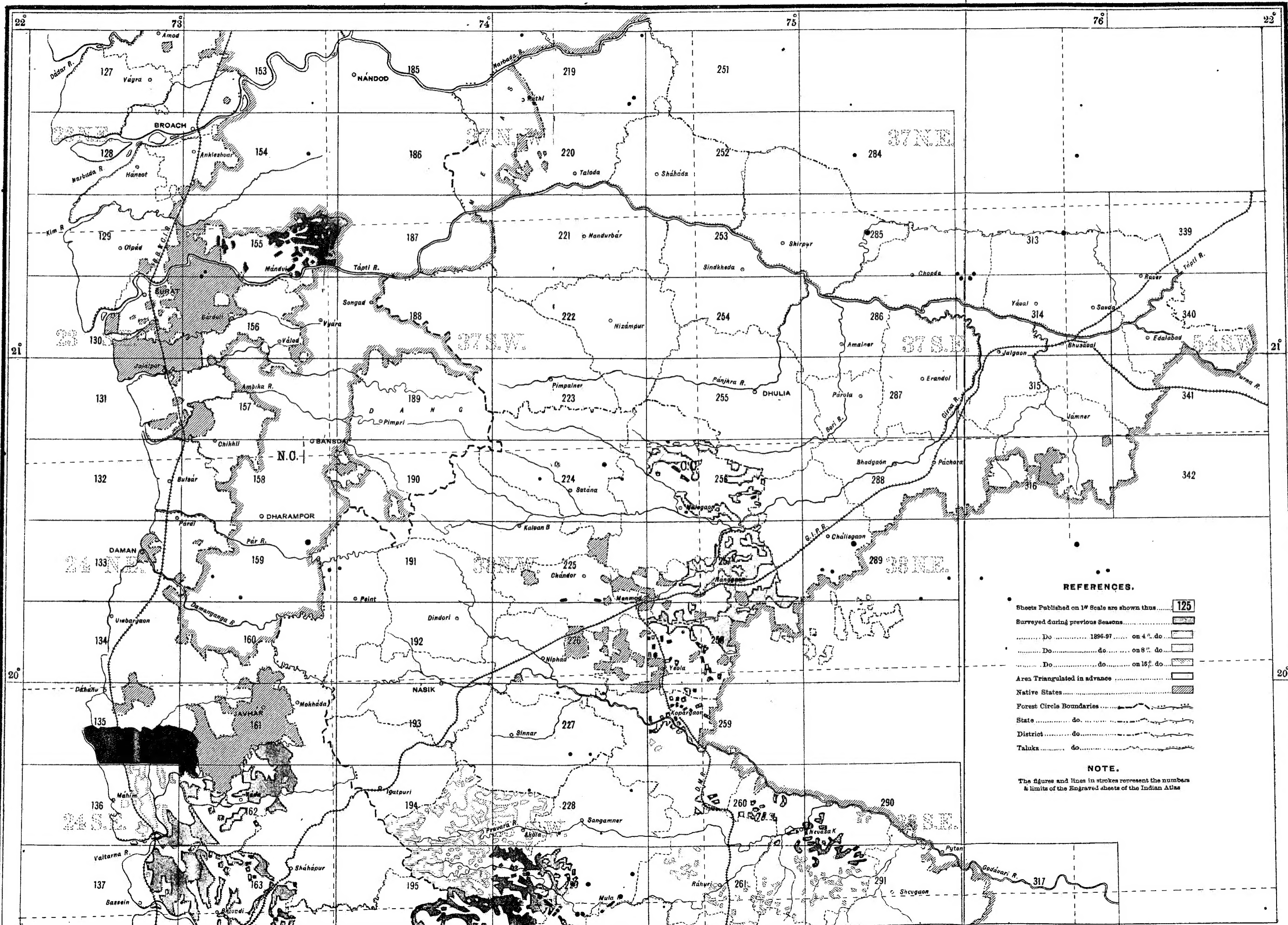
Acting Survey Commissioner and Director,
Land Records and Agriculture.

BOMBAY SURVEY.

INDEX TO THE FOREST SURVEYS IN PORTIONS OF THE NORTHERN & CENTRAL CIRCLES.

1896-97.

No. 17 PARTY.



REFERENCES.

- Sheets Published on 1" Scale are shown thus 125
- Surveyed during previous Seasons 125
- Do 1896-97 on 4" do 125
- Do do on 8" do 125
- Do do on 15" do 125
- Area Triangulated in advance 125
- Native States 125
- Forest Circle Boundaries 125
- State do 125
- District do 125
- Taluka do 125

NOTE.

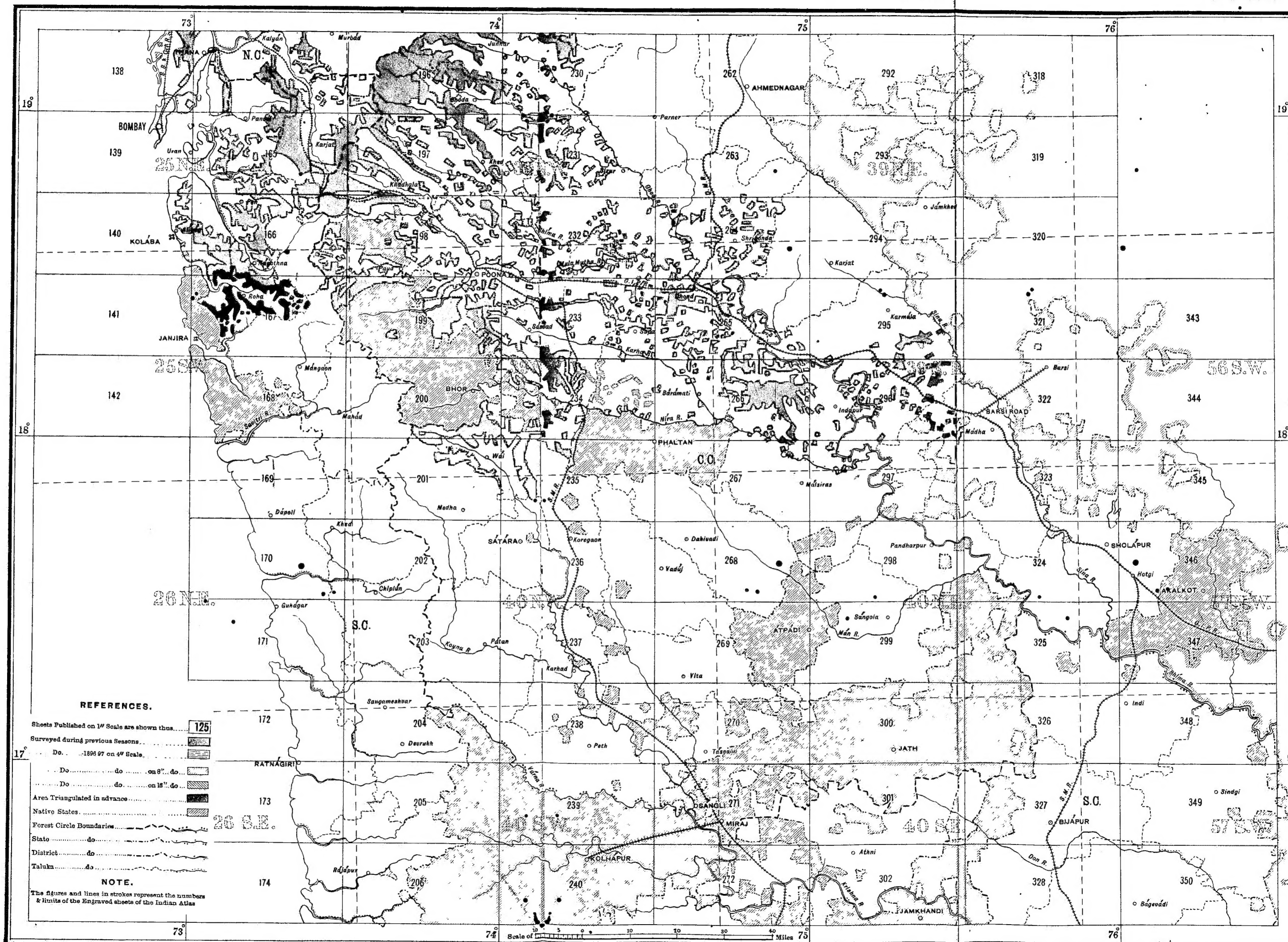
The figures and lines in strokes represent the numbers & limits of the Engraved sheets of the Indian Atlas

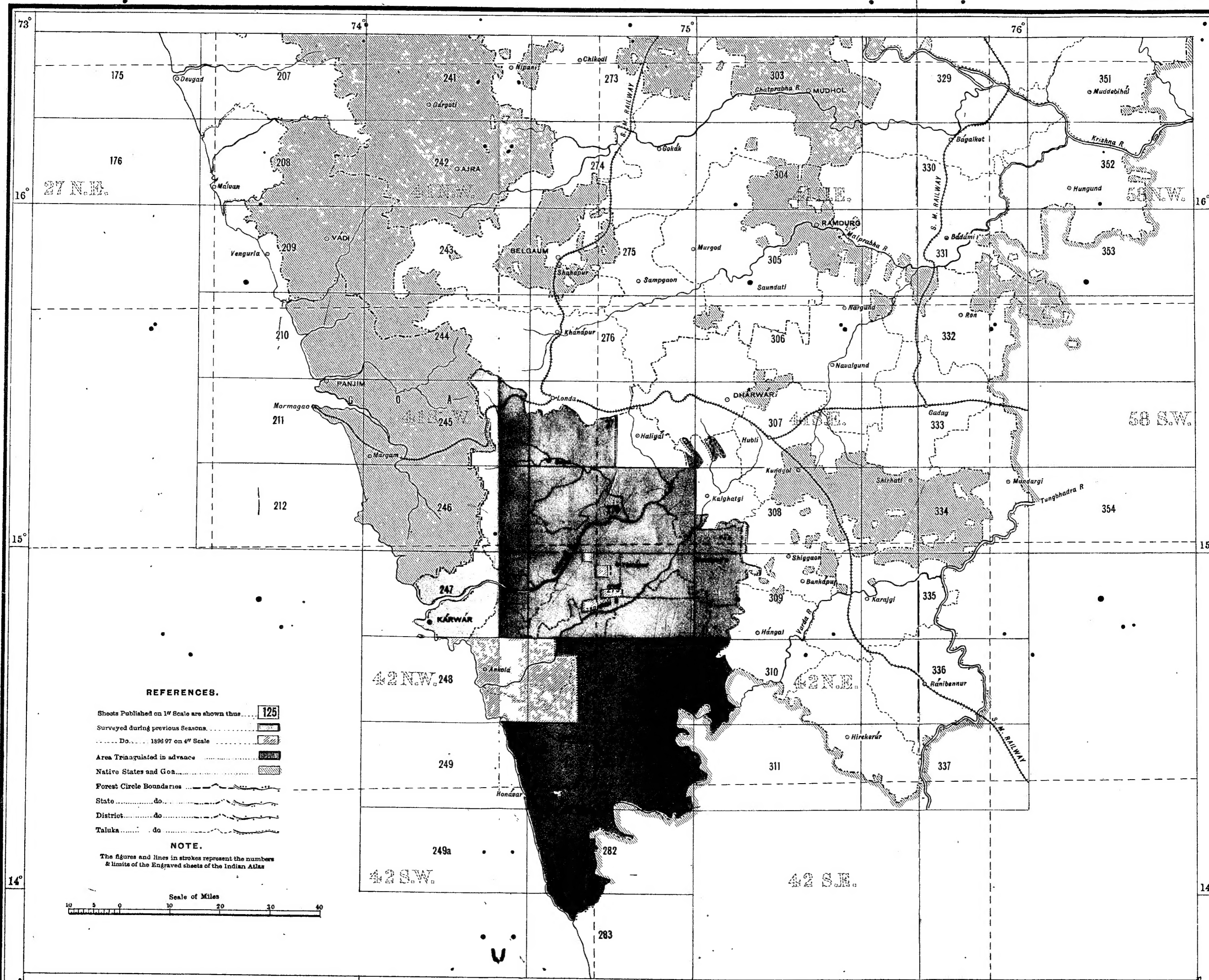
BOMBAY SURVEY.

1896-97.

INDEX TO THE FOREST SURVEYS IN PORTIONS OF THE NORTHERN, CENTRAL, & SOUTHERN CIRCLES.

No 17 PARTY.





Forest Administration Reports of the Bombay Presidency, including Sind, for 1896-97, and the Annual Report of the Bombay Forest Survey for the year ending September 1897.

No. 4366 of 1898.

REVENUE DEPARTMENT.

Bombay Castle 4th July 1898.

Memorandum from the Survey Commissioner and Director of Land Records and Agriculture, No. S.—1922-A., dated 11th November 1897—Submitting, with his remarks, the Annual Report of the Bombay Forest Survey for the year ending 30th September 1897.

Memorandum from the Commissioner, N. D., No. 721, dated 25th February 1898—Forwarding, with his remarks, a letter No. 2111, dated 15th October 1897, from the Conservator of Forests, N. C., who submits the Forest Administration Report of the Northern Circle for the year 1896-97.

Memorandum from the Commissioner in Sind, No. 937, dated 5th March 1898—Forwarding, with his remarks, a letter No. 3141, dated 9th November 1897, from the Conservator of Forests, Sind Circle, who submits the Forest Administration Report of the Sind Circle for the year 1896-97.

Memorandum from the Commissioner, C. D., No. R.—866, dated 10th March 1898—Forwarding, with his remarks, a letter No. 6316, dated 4th idem, from the Conservator of Forests, C. C., who submits the Forest Administration Report of the Central Circle for the year 1896-97.

Memorandum from the Commissioner, S. D., No. 1089, dated 24th March 1898—Forwarding, with his remarks, a letter No. 7359, dated 31st January 1898, from the Deputy Conservator of Forests in charge S. C., who submits the Forest Administration Report of the Southern Circle for the year 1896-97.

RESOLUTION.—These reports should have reached Government by the 1st October; they were received by the Commissioners between the end of January and the middle of March, and were forwarded at dates between the 25th of February and the 24th of March. The Sind Report is stated to have been delayed by the necessity for the rectification of discrepancies, but in the other cases no explanation has been furnished; the orders of Government insisting on punctuality have been repeated year after year without effect, and the Conservators of the Northern, Central and Southern Circles should explain the reasons for the disregard of those orders.

2. The following statement shows the changes that have taken place in the forest area during the year under review :—

| Circle. | Area on 1st July 1896. | | | Added. | | Excluded. | | Area on 30th June 1897. | | |
|------------------|--|---------------------------------------|--|-------------------------------------|------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|--|
| | Reserved. | Protected. | Total Forest Area. | Reserved. | Protected. | Reserved. | Protected. | Reserved. | Protected. | Total Forest Area. |
| | Sq. miles. | Sq. miles. | Sq. miles. | Sq. miles. | Sq. miles. | Sq. miles. | Sq. miles. | Sq. miles. | Sq. miles. | Sq. miles. |
| Northern Circle. | *1,184 ³⁸⁵ / ₆₄₀ | 434 ⁴⁸ / ₆₄₀ | 1,618 ⁴³³ / ₆₄₀ | 8 ¹⁵³ / ₆₄₀ | ... | 1 ³⁸³ / ₆₄₀ | 19 ¹⁹ / ₆₄₀ | 1,191 ¹⁵⁵ / ₆₄₀ | 434 ²⁹ / ₆₄₀ | 1,625 ¹⁸⁴ / ₆₄₀ |
| Central Circle. | 6,337 ⁵⁰⁹ / ₆₄₀ | 12 ⁷⁸ / ₆₄₀ | 6,350 ³⁵ / ₆₄₀ | 14 ³⁶³ / ₆₄₀ | ... | 108 ¹⁰⁸ / ₆₄₀ | 14 ¹⁴ / ₆₄₀ | 6,355 ²¹⁶ / ₆₄₀ | 12 ⁶² / ₆₄₀ | 6,364 ²⁷⁸ / ₆₄₀ |
| Southern Circle. | 2,910 ⁵⁹³ / ₆₄₀ | 2,334 ³²⁹ / ₆₄₀ | 5,245 ²⁸² / ₆₄₀ | 794 ⁵¹⁴ / ₆₄₀ | ... | 5156 ⁵¹⁵⁶ / ₆₄₀ | 756 ²³⁵ / ₆₄₀ | 3,700 ³¹¹ / ₆₄₀ | 1,578 ⁹⁴ / ₆₄₀ | 5,278 ⁴⁰⁵ / ₆₄₀ |
| Sind Circle. | 1,060 ¹⁰⁶ / ₆₄₀ | 437 ³⁷ / ₆₄₀ | 1,064 ⁴⁷⁸ / ₆₄₀ | †3 ⁵³⁵ / ₆₄₀ | ... | ... | 3 ⁴²⁷ / ₆₄₀ | 1,064 ¹ / ₆₄₀ | 585 ⁵⁸⁵ / ₆₄₀ | †1,064 ⁵⁸⁵ / ₆₄₀ |
| Total ... | 11,493 ⁴⁰³ / ₆₄₀ | 2,785 ¹⁸⁵ / ₆₄₀ | 14,278 ⁵⁸⁸ / ₆₄₀ | 821 ²⁸⁵ / ₆₄₀ | ... | 7 ⁵ / ₆₄₀ | 760 ⁵⁵ / ₆₄₀ | 12,308 ⁴³ / ₆₄₀ | 2,025 ¹⁸⁰ / ₆₄₀ | 14,333 ¹⁷³ / ₆₄₀ |

* Excluding the area of leased forests in the Dāngs which is given as 678½ square miles.

† Exclusive of an area of ³⁴²⁷/₆₄₀ square miles of unclassified forest.

In the Northern Circle the settlement operations added 4,924 acres to the North and Central Thána forests. In the Central Circle the area was increased by the rectification of book entries affecting some $4\frac{1}{2}$ square miles, and by the reservation of some ten square miles, chiefly in the Sátára District. The principal changes occurred in the Southern Circle where in Kánara 664 square miles and in Bijápur 89 square miles of Protected Forest were converted into Reserved, while fresh reserves, measuring $23\frac{1}{2}$ and 8 square miles respectively, were created in Bijápur and Kolába. In the Sind Circle the alterations were unimportant, but it is noted that 3,514 acres were lost by erosion on the banks of the Indus. The extraction of wood to the value of Rs. 5,380 from this area in anticipation of erosion is a sign of the initiation of necessary precautions, but cannot be taken as an adequate protection of the interests of the State, and it is hoped that the measures now begun will be prosecuted with greater success in future.

3. Forest Settlement Reports were completed during the year for the Dáhánu, Umbargaon, and Murbád Ranges in Thána, and considerable progress in settlement took place also in Kánara. In all Circles the work is now well advanced; in the Northern little remains but the revision of the Mándvi Taluka; in the Central the acquisition of 15,816 acres of occupied lands within sanctioned forest limits is still under negotiation; in the Southern the statistical statement furnished shows an area of 1,118 square miles unfinished, which, however, has been reduced by one-half by the sanction of proposals dealt with since the date of the report, and by the correction of inaccuracies in the original notification of area; in Sind the settlement of 16,862 acres is under the consideration of the Revenue officers. It is unfortunate that, owing to the deputation on famine duty of the Forest Settlement Officer, it was impossible to proceed with the field work of the Southern Circle.

4. The following statement compares the length of boundary demarcated and the cost with the figures of the preceding year :—

| Circle. | 1895-96. | | 1896-97. | |
|------------------------|--|-------|--|--------|
| | Length in miles of boundary lines cleared. | Cost. | Length in miles of boundary lines cleared. | Cost. |
| | Miles. | Rs. | Miles. | Rs. |
| Northern Circle | 130 $\frac{1}{2}$ | 1,878 | 260 | 4,814 |
| Central Circle | 669 | 6,420 | 2,746 | 16,917 |
| Southern Circle | 124 | 862 | 20 | 3,888 |
| Sind Circle | 176 | 929 | 81 $\frac{85}{628}$ | 240 |

In the Central Circle the work was pushed on as a measure of famine relief, with very satisfactory results, both in the extent of boundary cleared, and in the reduction of cost. Progress was made in the Northern Circle, while in Sind special causes interfered to retard operations. In the Southern Circle the restriction of forest expenditure on account of famine checked the progress of the work in the Belgaum and Dhárwár districts and only 20 miles are shown in Form No. 48 as having been newly demarcated in the whole Circle; but in Bijápur the preparation of stone pillars for boundaries before laid out was undertaken as a form of famine relief, and Rs. 3,210 out of the total sum of Rs. 3,888 expended on demarcation were devoted to that object. None of the reports show how many miles of forest boundary still remain to be demarcated.

5. The work of the Forest Survey Party is shown below :—

| Circle. | | | | Triangulation. | Traversing. | Detail Survey. |
|-----------------|-----|-----|-----|----------------|-------------|----------------|
| | | | | Sq. miles. | Sq. miles. | Sq. miles. |
| Northern Circle | ... | ... | ... | 141 | 10 | 51.7 |
| Central do. | ... | ... | ... | 161 | ... | 239.13 |
| Southern do. | ... | ... | ... | 1,074 | 234 | 363.5 |

Surveys were carried on in Surat and Thána in the Northern, in Ahmednagar and Poona in the Central, and in Kánara and Kolába in the Southern Circle. The marginal statement extracted from Form No. 49 shows the progress that has been made up to date. There has been a considerable increase in the cost per mile, which is only partially accounted for by the accidental diminution of supervisional expenditure last year.

| Circle. | | Total forest area on June 30th, 1897. | Total surveyed. | Remainder. |
|----------|-----|---------------------------------------|-----------------|------------|
| | | Sq. miles. | Sq. miles. | Sq. miles. |
| Northern | ... | 1,625 | 803 | 822 |
| Central | ... | 6,364 | 1,302 | 5,062 |
| Southern | ... | 5,278 | 2,741 | 2,537 |

It is hoped that some improvement will result from the substitution, where possible, on triangulation work, of Native for European agency. It is essential that the work of the draftsmen in the preparation of maps should not be allowed to fall behind the field work of the party.

6. In the Northern Circle working plans were completed for the Godhra, Máhim, Bassein, and Váda forests, and the plans for five other forest ranges were under consideration or preparation; in all 20 per cent. of the total forest area is under sanctioned working plans. 1,134 coupes were marked out on the ground, and this work is being carried on in advance of requirements.

The progress made in the Central Circle is not clearly shown in the report; but from Form No. 50 it appears that, while plans for an area of 1,878 square miles have been taken in hand, none were actually completed during the year. The Conservator states that 42 per cent. of the whole area is under detailed treatment by means of provisional working plans; the area under sanctioned plans is, however, less than 14 per cent. His Excellency the Governor in Council recognises the difficulties attendant on the rapid completion of the demarcation of compartments, but must insist that no effort be spared with the establishment available to carry out in their entirety the views of this Government and the Government of India as detailed in paragraph 5 of letter No. 959—173-5F of October 14th, 1897, from the latter Government.

In the Southern Circle two parties were at work, and made satisfactory progress in the collection of data for future plans. The area under sanctioned plans amounts to 13 per cent. of the whole.

In Sind a beginning was made in the preparation of working plans; though impeded first by demarcation work, which was under the same officer, and subsequently by the plague; fair progress was made in the Sukkur Division.

7. In the Southern Circle two roads of some importance were constructed; a Range Office and a Saw-Mill were built; and there was considerable activity in the provision of wells and forest-houses. Elsewhere the expenditure was small and was confined to the improved housing of subordinates, and necessary repairs to existing buildings and communications.

8. The following statement shows the number and result of prosecutions for forest offences, the action taken under Section 67 of the Forest Act, and the number of animals impounded, during the year under report and the preceding year :—

| 1895-96. | | | | | | | | |
|----------------------|---------------|-------------|-------------------------|------------------|------------------|--|--|---------------------------|
| Circle. | Prosecutions. | Acquittals. | Percentage of failures. | Cases compounded | Amount realised. | Number of animals impounded for trespass in closed area. | Number of animals impounded for grazing in open area without passes. | Total of columns 7 and 8. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | Rs. a. p. | | | |
| Northern Circle ... | 259 | 50 | 19.3 | 404 | 2,008 2 8 | 5,636 | 2,910 | 8,546 |
| Central do. ... | 1,799 | 333 | 18.5 | 2,056 | 6,602 0 0 | 196,661 | 125,333 | 321,994 |
| Southern do. ... | 504 | 104 | 20.6 | 360 | 1,406 0 0 | 8,328 | 6,1 3 | 14,511 |
| Sind do. ... | 70 | 28 | 40 | 157 | 419 0 0 | 17,270 | 11,569 | 28,839 |
| Total ... | 2,632 | 515 | 19.5 | 2,977 | 10,435 2 8 | 227,895 | 145,995 | 373,890 |
| 1896-97. | | | | | | | | |
| Northern Circle. ... | 235 | 76 | 32.3 | 482 | 2,042 4 7 | 7,535 | 2,990 | 10,525 |
| Central do. ... | 1,498 | 321 | 21.4 | 2,091 | 7,647 0 0 | 138,770 | 101,192 | 239,962 |
| Southern do. ... | 342 | 100 | 29.2 | 463 | 1,062 0 0 | 7,495 | 8,679 | 16,174 |
| Sind do. ... | 52 | 18 | 35 | 210 | 441 0 0 | 26,092 | 11,367 | 37,459 |
| Total ... | 2,127 | 515 | 24.2 | 3,246 | 11,192 4 7 | 179,892 | 124,228 | 304,120 |

There was a decrease of 505 in the number of prosecutions; the results however were less successful, one case in every four ending in acquittal, and in two of the Thána divisions the percentage of failure was as high as 40 and 44.

The number of cases compounded increased slightly; the system appears to have worked satisfactorily, and in the hard circumstances of the year commendable leniency was exercised.

9. In the Central Circle the number of cattle impounded was less by 82,032 than in 1895-96. For the preservation of cattle 1,000 square miles of closed forest throughout the Deccan were thrown open for free grazing, while in open forests all impounding was discontinued after November 1896. The fact that in the four previous months 101,192 animals had been impounded affords a further proof of the necessity for the change of system directed in Government Resolution No. 1663 of the 8th March last. The increase in the Northern and Southern Circles, in which however the total number of impoundings continued to be moderate, is attributed to the general scarcity of fodder; the increase in Sind was due to the additional closure of 213 square miles of forest against browsers, the trespass and seizure of which class of animals account for more than half of the impoundings.

The areas closed and open in the several Circles were as follows :—

| Circle. | 1895-96. | | 1896-97. | | Remarks. |
|---------------------|------------|------------|------------------------------------|--|--|
| | Closed. | Open. | Closed. | Open. | |
| | Sq. miles. | Sq. miles. | Sq. miles. | Sq. miles. | |
| Northern Circle ... | 359½ | *1,938 | 319 | *1,984½ ^{0.4} _{6.40} | *Including the area of the leased forest in the Dings which is 678½ square miles. |
| Central do. ... | 1,785 | 4,565 | 701 | 5,663 | |
| Southern do. ... | 568 | 4,692 | 632 | 4,646 | |
| Sind do. ... | 60 | 1,004 | 85½ ^{4.1} _{6.40} | †982½ ^{7.2} _{6.40} | †Inclusive of an unclassified forest area of 3½ ^{2.5} _{6.40} square miles. |

In future under the orders issued in the Government Resolution cited above only those areas in the Central Circle which contain forest proper or fuel reserves will remain under the management of the Forest Department; and it is the wish of Government that official interference with pasture lands shall be restricted to what is necessary to preserve State property of substantial value. The right of Government to levy fees for grazing must be maintained, but the collection of these fees will be entrusted to village headmen, who will be responsible that no evasion of payment is permitted. His Excellency the Governor in Council trusts that these measures will at once allay irritation against forest conservation, and will enable the Department, by concentrating its energies upon an area which it can manage effectively, to exhibit to the people the benefits of scientific forestry, and in the course of time enlist their co-operation. Similar orders have been issued in Government Resolutions No. 9534, dated 28th November 1896, and No. 4017, dated 17th June 1898, with regard to the Bijápúr and Belgaum districts in the Southern Circle and will probably be found equally applicable in the Dhárwár District. In other districts, of which Panch Maháls, Surat, Thána, Kolába and Ratnágiri have already been dealt with, the reserved forests must be managed as forest proper. In Ratnágiri the area is too small for the employment of a Forest officer and will be managed by the Collector; but in Thána extensive woodlands will be constituted protected forests, and utilized for the supply of local wants.

10. The number of agricultural cattle allowed to graze free was as follows:—

| Circle. | Number of Agricultural Cattle allowed to graze free. | |
|---------------------|---|----------|
| | 1895-96. | 1896-97. |
| Northern Circle ... | 302,422 | 343,151 |
| Central do. ... | 264,383 | 302,564 |
| Southern do. ... | 112,420 | 102,117 |
| Sind do. ... | 27,774 | 26,187 |
| Total ... | 706,999 | 774,019 |

In the Northern and Central Circles there was a very considerable increase.

11. There has been a marked decrease in the recorded number and extent of fires which may, it is believed, be ascribed in a large measure to the special precautions taken. The Conservators of Northern and Central Circles, however, think that, owing to the impossibility of close supervision in the special circumstances of a famine year, the reports may be less accurate than usual. It is also to be observed that the absence of grass in the Eastern Deccan made the areas practically immune from fire, although on the other hand the unusual drought made areas on which there was grass more susceptible. In the Southern Circle there has been an unfortunate increase, while in Sind there is a reduction of two-thirds. It is noticeable that of the fires the origin of which was ascertained, a large proportion (43 per cent.) were due to the carelessness of passing villagers, and malicious mischief accounted for thirty-three cases only. District Magistrates have been informed of the importance attached by Government to the repression of incendiarism, and it is incumbent on Forest officers to bring to the notice of the District Magistrate cases in which they deem the punishment awarded inadequate.

12. Except in Sind, where under an inundation of the most favourable character there was a general improvement of growth, natural reproduction was retarded by drought. There was considerable activity in artificial regeneration, but little success was attained owing to the failure of rain. Experiments in nurseries though undoubtedly of great value and interest must necessarily be restricted owing to their incommensurate cost, and His Excellency in Council is of opinion that the time has not yet come for the development by the Department of the exotic fruit nurseries advocated by the Commissioner, N. D.

13. The operations of the Department have in every Circle been seriously hampered by the misfortunes of a year of famine and plague. Slackness of business in the areas of scarcity reduced the demand both for timber and firewood, and where the effects of famine were not felt, the plague with its inevitable restrictions checked exploitation. In the Northern Circle in Thána the material as it stood in 242 coupes was sold but the rate realized fell by over 20 per cent.—from Rs. 36·4 to Rs. 28·7 per acre; departmental workings were maintained at their normal activity, but in Panch Mahals the agricultural depôt system proved a failure, and in Surat two lakhs of bamboos sold from the Dáng forests were left unremoved. In the Central Circle attempts made to introduce the Thána system of selling the material as it stood in coupes were unsuccessful; the removal of produce by purchasers decreased by more than one-half, and while the amount of timber and firewood exploited departmentally increased, the price obtained fell 38 per cent. In the Southern Circle the uniform decrease in outturn calls for no further explanation. In Sind the coupe contract system was successfully prosecuted, and the rate per acre obtained rose from Rs. 6 to Rs. 8, but there was a material decline in sales to purchasers other than the contractors.

14. The following statement gives the information regarding the year's outturn of timber and other forest produce in the form prescribed by Government Resolution No. 8265 of 21st October 1896:—

| Circle. | Agency by which material removed. | Material removed. | | | | | Average Outturn per square mile of all forests. | | |
|-----------------------|-----------------------------------|-------------------|-------------|-------------|------------|----------------|---|----------|----------------|
| | | Timber. | Fuel. | Total Wood. | Bamboos. | Minor produce. | Timber and fuel. | Bamboos. | Minor produce. |
| | | C. ft. | C. ft. | C. ft. | No. | Rs. | C. ft. | No. | Rs. |
| Northern Circle. | Government .. | 117,927 | 117,576 | 235,503 | 1,582 | ..... | ... | ... | ... |
| | Purchasers .. | 2,068,004 | 3,038,239 | 5,106,333 | *1,748,004 | 9,555 | .. | ... | ... |
| | Free grants ... | 9,730 | 500,000 | 509,730 | 11,835 | 2,930 | ... | ... | ... |
| | Right-holders ... | ..... | 1,029,546 | 1,029,546 | 52,040 | 6,190 | ... | ... | ... |
| | Total .. | 2,195,751 | 4,685,361 | 6,881,112 | *1,811,461 | 18,675 | †4,234 | †1,114 | †11 |
| Central Circle... | Government .. | 264,880 | 2,503,614 | 2,768,444 | ..... | 20,570 | ... | ... | ... |
| | Purchasers .. | 753,105 | 1,161,251 | 1,914,356 | 1,079,529 | 4,02,738 | ... | ... | ... |
| | Free grants ... | 26,595 | 89,365 | 65,960 | 2,600 | ..... | ... | ... | ... |
| | Right-holders ... | 2,037 | 4,222,495 | 4,225,182 | 20,000 | 3,11,835 | ... | ... | ... |
| | Total .. | 1,047,217 | 7,926,725 | 8,973,942 | 1,102,129 | 7,35,143 | 1,410 | 173 | 116 |
| Southern Circle. | Government .. | ‡796,166 | 3,511,570 | 4,307,736 | 2,178 | 76,299 | ... | ... | ... |
| | Purchasers ... | 671,723 | 3,880,826 | 4,552,554 | §3,410,570 | 80,172 | ... | ... | ... |
| | Free grants ... | 57,345 | 1,189 | 58,533 | 22,550 | 6 | ... | ... | ... |
| | Right-holders ... | ..... | ..... | ..... | ..... | ..... | ... | ... | ... |
| | Total .. | ¶1,525,239 | 7,393,584 | 8,918,823 | 3,441,298 | 106,477 | 1,689 | 652 | 20 |
| Sind Circle | Government .. | 1,643 | 78,203 | 79,846 | ..... | 282 | ... | ... | ... |
| | Purchasers .. | 355,775 | 17,521,534 | 17,877,309 | ..... | 5,610 | ... | ... | ... |
| | Free grants .. | 10,937 | 7,088 | 18,025 | ..... | 87 | ... | ... | ... |
| | Right-holders .. | ..... | 171,281 | 171,281 | ..... | 900 | ... | ... | ... |
| | Total .. | 368,355 | 17,778,106 | 18,146,461 | ..... | 26,879 | 16,994 | ... | 25 |
| All Circles combined. | Government ... | 1,180,566 | 6,210,963 | 7,391,529 | 3,760 | 97,151 | ... | ... | ... |
| | Purchasers .. | 3,848,702 | 25,601,850 | 29,450,552 | 6,242,10 | 4,68,075 | ... | ... | ... |
| | Free grants .. | 101,607 | 547,641 | 652,248 | 36,985 | 3,023 | ... | ... | ... |
| | Right-holders .. | 2,687 | 5,423,322 | 5,426,009 | 72,040 | 3,18,825 | ... | ... | ... |
| | Grand Total for 1896-97... | 5,130,562 | 37,783,776 | 42,920,338 | 6,354,883 | 8,87,174 | 2,993 | 443 | 61 |
| | Grand Total for 1895-96... | 7,872,898 | 49,560,780 | 57,433,678 | 7,647,956 | 10,83,216 | 4,022 | 535 | 76 |
| | Difference in 1896-97 ... | -2,736,336 | -11,777,004 | -14,513,340 | -1,293,063 | -1,96,042 | -1,029 | -92 | -15 |

* Besides 5,073 cart-loads and 4,263 head-loads of bamboos.

† These averages are per square mile of the total forest area of the Northern Circle excluding the leased forests of the Dángs.

‡ Besides khandis, &c., of sandal-wood.

§ Besides 63 cart-loads of dry bamboos.

¶ Besides 11,534,581 cubic feet of timber and fuel, 515,215 bamboos, and minor produce of the value of Rs. 17,327 removed under privileges.

15. The receipts from grazing fees and the sale of grass in the several Circles were as follows :—

| Circle | Receipts. | |
|---------------------|-----------|----------|
| | 1895-96. | 1896-97. |
| | Rs. | Rs. |
| Northern Circle ... | 21,451 | 22,672 |
| Central do. ... | 4,07,400 | 4,44,607 |
| Southern do. ... | 95,989 | 79,067 |
| Sind do. ... | 59,934 | 61,055 |
| Total ... | 5,84,774 | 6,07,401 |

Of the sum realized in the Central Circle Rs. 66,361 were due to the operations for the supply of pressed grass to the famine-affected districts, the cost of which however amounted to Rs. 1,26,705. But sufficient compensation for this loss was found in the aid given in the preservation of agricultural cattle, which besides saving many cultivators from destitution contributed, with other measures, to prevent a decline in land revenue which otherwise would have been inevitable.

16. Free grants of timber were made in the several Circles to the extent shown below :—

| Circle. | Value of free grants. | |
|--------------------|-----------------------|----------|
| | 1895-96. | 1896-97. |
| | Rs. | Rs. |
| Northern Circle... | 4,555 | 4,415 |
| Central do. ... | 4,201 | 2,087 |
| Southern do. ... | 64,255 C. ft. | 12,324 |
| Sind do. ... | 1,411 | 1,532 |

17. The financial results of the year under review and of the preceding year are compared in the following statement :—

| Circle. | Receipts. | | Expenditure. | | Net Revenue. | | Increase or decrease in net Revenue in |
|---------------------|-----------|-----------|--------------|-----------|--------------|-----------|--|
| | 1895-96. | 1896-97. | 1895-96. | 1896-97. | 1895-96. | 1896-97. | 1896-97. |
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Northern Circle ... | 7,83,283 | 5,83,437 | 2,97,437 | 3,19,881 | 4,85,846 | 2,63,556 | —2,22,290 |
| Central do. ... | 7,59,605 | 7,04,365 | 5,27,207 | 6,93,400 | 2,32,398 | 10,965 | —2,21,434 |
| Southern do. ... | 14,98,084 | 14,40,798 | 8,54,353 | 8,76,557 | 6,43,731 | 5,64,241 | —79,490 |
| Sind do. ... | 4,65,745 | 3,12,297 | 2,34,807 | 1,31,209 | 2,30,938 | 1,78,088 | —52,850 |
| Total ... | 35,06,717 | 30,40,897 | 19,13,804 | 20,24,047 | 15,92,913 | 10,16,850 | —5,76,063 |

The decrease in the total net revenue amounted to five and three-quarter lakhs. The principal causes have been sufficiently explained above; subsidiary causes were : in the Central Circle, increase of expenditure on establishments as compensation for famine prices, and special provision of work as a form of famine relief ; and in Sind the impossibility of effecting recoveries from contractors within the year. On the other hand, receipts in the Southern Circle were swelled by the reduction of outstandings of the previous year.

In Sind the cessation of the departmental operations reduced the expenditure by a lakh and a half.

18. Dismissals from service amongst the subordinate establishment were numerous, and, except in Sind, no improvement in their conduct is reported. The extent of their misconduct cannot, however, be judged without information as to the proportion that these numbers bear to the total establishment entertained. This information should in future be supplied.

| | | | |
|-----------------|-----|-------------|--|
| Northern Circle | ... | 18 | |
| Central Circle | ... | 61 | |
| Southern Circle | ... | 37 | |
| Sind | ... | Not stated. | |

19. The year has been marked by difficulty and distress throughout, and the Forest Department owing to the commercial nature of its transactions has been subjected to a specially severe strain. The decline of revenue was inevitable and His Excellency in Council recognises that, but for the strenuous exertions and devotion to duty of the Conservators and the officers serving under them the administration would undoubtedly have been more seriously affected than it actually was by the general dislocation of private business throughout the Presidency.

20. The usual memorandum of discrepancies found in the reports is appended to this Resolution.

H. S. LAWRENCE,
Under Secretary to Government.

To

| | | |
|---|---|-----------------------------|
| The Commissioner in Sind, | } | With copies of the Reports. |
| The Commissioner, N. D., | | |
| The Commissioner, C. D., | | |
| The Commissioner, S. D., | | |
| All Collectors, including the Collectors and Deputy Commissioners in Sind, | | |
| The Conservators of Forests, Central, Southern and Sind Circles, | | |
| The Deputy Conservator of Forests in charge N. C., | | |
| The Survey Commissioner and Director of Land Records and Agriculture, | | |
| The Superintendent, Bombay Forest Surveys, | | |
| The Public Works Department of the Secretariat, | | |
| The Accountant General, | } | By letter. |
| The Government of India, | | |
| The Secretary of State for India. | | |
| The Editors' Table, Bombay, | | |
| The Editors' Table, Poona, <i>care of</i> the City Magistrate, Poona, | | |
| The Editor of the <i>Dhárwár Vritt</i> , Dhárwár (for his own use and for the use of the Editors of other newspapers in Dhárwár), | | |
| The Editors' Table, Belgaum, <i>care of</i> the Secretary, Belgaum Municipality. | | |

No. of 1898.

Copy forwarded for information and guidance to

**Memorandum referred to in paragraph 20 of Government Resolution
No. 4366, dated 4th July 1898.**

Northern Circle.

The rate per mile of the cost of erecting boundary marks in the North, Central and South Thána Divisions and in the Surat Division should be 16.1 instead of 16.01 shown in the penultimate column of the statement embodied in paragraph 11 of the report.

In paragraph 17 of the Forest Report it is stated that the figures given in it as regards Forest Survey are for the Forest year, whereas according to Statement A accompanying the report of the Superintendent, Bombay Forest Surveys, these figures are for the Survey year.

The total forest area shown in Form No. 46 is 1,191 square miles 155 acres, but in the penultimate column of the statement embodied in paragraph 25 of the report showing the progress made in working plans in the Northern Circle during the year 1896-97, the total forest area is stated to be 2,630 square miles.

The average price per acre of the coupes exploited during 1896-97 should be Rs. 28.7, and not Rs. 28.5 shown in the last column of the statement subjoined to paragraph 63 of the report.

In the statement appended to paragraph 70 of the report the total outturn of bamboos in 1896-97 is stated to be 1,747,586 besides 5,073 cart-loads and 4,263 head-loads, whereas in Form No. 57 the total outturn is shown to be 1,811,461 besides 5,073 cart-loads and 4,263 head-loads.

The statement of the outturn of produce appended to paragraph 72(a) of the report does not show all the details required by paragraph 9 of Government Resolution No. 8265, dated 21st October 1896.

The net revenue for 1895-96 should be Rs. 4,85,846 and not Rs. 4,85,746 given in the last column of the statement appended to paragraph 75 of the report.

In Form No. 51 in the column 'New works undertaken during the year,' the grand total of the expenditure incurred on buildings should be Rs. 1,845-10-4 instead of 1,797-13-2, and of that on 'Roads and Paths' Rs. 2,005-7-3. In the column 'Repairs executed during the year' Rs. 688-10-6 should be entered as the grand total of the expenditure incurred.

In columns 13 and 14 of Form No. 52 the figures 19 and 21 respectively should be entered as the total of B cases disposed of under Section 67 of the Forest Act in Surat; this will raise the total of A, B and C classes of the two columns for the Surat District to 26 and 30 respectively instead of 7 and 9, and the grand total for the Circle of the number of cases and persons under B should be raised proportionately. The total number of convictions in the Circle during the year should be 641 instead of 681 shown in column 9 of the Form,

The total forest area of the Circle given in Form No. 54 is 2,265 $\frac{3}{4}$ square miles, whereas according to the details given in Forms Nos. 46 and 46 A it amounts to 1,625 $\frac{184}{640}$ square miles exclusive of the leased forests of the Dangs measuring 678 $\frac{320}{640}$ square miles.

Rs. 215 should be entered in column 7 (Receipts) of Form No. 56 against the entry 'Total Regular Plantations' as well as against 'Grand Total of cultural operations and regular plantations'.

The two columns of Form No. 60 A headed 'Difference in value' are apparently incorrectly prepared. The entries shown in the column 'In favour of the year' should be entered in the column 'Against the year,' and *vice versa*. According to the details given in the form the total value of live and dead stock on hand at the commencement and at the close of the year 1896-97 in the Panch Maháls amounts to Rs. 11,596 and Rs. 13,331, and not Rs. 11,746 and Rs. 13,531, and the grand total for the whole Circle amounts to Rs. 54,476 and Rs. 55,820, and not Rs. 54,626 and Rs. 55,970 shown in the Form,

Central Circle.

The statement appended to paragraph 36 of the report shows that at the end of the year 1896-97 an area of 3,647 square miles of forest still remains to be brought under working plans, whereas according to the details given in Form No. 50 the areas for which working plans have still to be taken in hand amount to 3,598 square miles.

The amount of Rs. 1,442 spent on additions and alterations to existing buildings specified in paragraph 41 and the sum of Rs. 1,256 expended in the construction of wells mentioned in paragraph 42 of the report have not been shown in Form No. 51 annexed to the report.

In paragraph 160 of the report it is stated that 4,800 cubic feet of bábul bark collected in the Tásgaon Range of the Sátára District was sold for Rs. 110, whereas in Form No. 58 its price is shown to be Rs. 131.

The total value of forest produce lost to forest revenue by concessions in the Central Circle according to the details given in the statement appended to paragraph 184 of the report amounts to Rs. 4,17,579, and not Rs. 4,17,519 shown in the last column of it.

The statement appended to paragraph 185 of the report does not contain columns for the value of fuel, timber, bamboos and grazing required under the orders contained in Government Resolutions No. 2872, dated 12th April, and No. 4269, dated 8th June 1897.

The total value of live and dead stock in West Khándesh on hand at the close of the year 1896-97 and the difference in value against the year should be Rs. 8,404 and Rs. 1,718 instead of Rs. 8,513 and 1,609 respectively shown in the 5th and 7th columns of Form No. 60A.

Southern Circle.

In the statement appended to paragraph 34 of the report the difference between 1896-97 and 1895-96 in the cost rate per acre of the work done by Working Plans Party No. II should be Re. 0-6-10·4 instead of Re. 0-6-8·4.

In the seventh column of Form No. 50 the total forest area of the Circle is stated to be 5,246 square miles, whereas according to the details given in Forms Nos. 46 and 46A it amounts to 5,278 square miles. According to the details given in columns 3 and 6 of Form No. 51 the total expenditure on 'Buildings' and on 'New work' undertaken during the year in the Northern Division of Kánara should be Rs. 10,200 instead of Rs. 16,200 entered in column 7 of the form.

The proportion of reserved forest area in the whole Circle under fire protection during 1896-97 to total area of reserves should, according to the details given in the statement appended to paragraph 65 of the report, be 35·3 instead of 44·96. The figure 144·7 shown in the last column of the statement against the Northern Division of Kánara as the proportion of area under fire protection to total area of reserves is evidently incorrect.

According to the details given in Form No. 58 the value of minor forest produce removed in the Northern Division of Kánara by purchasers amounts to Rs. 7,575 and not Rs. 16,541 mentioned in the 6th column and the total value of the produce amounts to Rs. 16,541 and not Rs. 25,507 shown in the penultimate column of the form.

Sind Circle.

In paragraph 34 of the report the amount spent on demarcation is stated to be Rs. 188-5-0, whereas in the 9th column of Form No. 48 it is shown to be Rs. 240.

In paragraph 37 of the report the length of boundary paths cleared and repaired is stated to be 1,406 miles, but from the details given in columns 2 and 3 of Form No. 48 it appears that 1,455 miles of boundaries were demarcated and repaired during the year.

In paragraph 84 of the report 687 acres of *regular plantations* are stated to have been added in the year 1896-97 in the Kot Sultán Reserve, whereas in Form No. 56 appended to the report 627 acres of *cultural operations* are shown to have been added. In the same paragraph it is also reported that 10 acres of regular plantations were created in the Abad Forest and 100 acres of bábul plantations in Garhi Halim Reserve, whereas in Form No. 56 no such areas are shown to have been added to regular plantations. From the details shown in the form it however appears that cultural operations were carried on to the extent of 182 acres in Abad and 27 acres in Garhi Halim.

The realisations from the sale-proceeds of bábul pods in the Nausháhro Division in 1896-97 are shown to be Rs. 782 in the statement appended to paragraph 123 of the report and Rs. 767 in Form No. 58 accompanying the report.

In paragraph 137 of the report the decrease in net receipts for the forest year 1896-97 is stated to be Rs. 52,856, whereas according to the details given in the statement at paragraph 134 the decrease amounts to Rs. 52,850.

In the statement appended to paragraph 139 of the report the total receipts and the surplus of receipts over expenditure for the forest year 1895-96 are stated to be Rs. 4,65,775 and Rs. 2,30,968, whereas in the statement appended to paragraph 134 they are shown to be respectively Rs. 4,65,745 and Rs. 2,30,938.